

21. (New) The laminate according to Claim 20, wherein the orientation direction of said fibrous filler is different between adjacent layers.

22. (New) The laminate according to Claim 21, wherein said orientation direction of said fibrous filler is orthogonal between adjacent layers.

REMARKS

The claims have been amended to place them in more readable form and specifically, in the case of Claim 1, to indicate that mixtures of resins may be used. Basis for this limitation may be found on page 11, lines 4-6 from the bottom. In Claim 3, a number of other resins have been added to the Markush group. Basis for the addition to Claim 3 may be found on page 9, second full paragraph under "Description of the Preferred Embodiments". The term "polyester" has been added after "crystalline" in Claim 5. Basis for this limitation may be found on page 10, first full paragraph from the bottom. Claims 6-7 have had "at least one" added thereto. Basis may be found in original Claims 9-10. In Claims 12 and 14, the term "unshaped" has been deleted. New Claims 16-22 have been added to preferred embodiments. Basis for new Claim 16 may be found on page 6, lines 7 and 8 of the specification. Basis for new Claim 17 may be found on page 12, lines 13-16 of the specification. Basis for new Claim 18 may be found on page 25, line 3 from the bottom, through page 26, line 19 of the specification. Basis for new Claim 19 may be found on page 26, lines 10-19 of the specification. Basis for new Claim 20 may be found on page 27, lines 6-18 of the specification. Basis for new Claim 21 may be found on page 27, lines 6-19 of the specification. Basis for new Claim 22 may be found on page 27, line 2 from the bottom, through page 28, line 12 of the specification. No new matter has been added into the amended claims or new claims.

A substitute specification is being supplied with this response under 37 C.F.R. § 1.125(a), as required by the Examiner. Applicants hereby state that the substitute specification supplied herewith contains only subject matter from the original specification and the preliminary amendment filed August 3, 2001.

REQUEST FOR RECONSIDERATION

Claims 1-22 are active in the case.

Claims 1-3 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite because of the confusion as to how many resins make up the base resin of the claims. Claim 1 has been amended as per the Examiner's suggestion.

Claims 12 and 14 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for the use of the term "unshaped". The term "unshaped" has been deleted from the claims. The claims meet the requirements of 35 U.S.C. § 112.

Claims 1, 2, 6, 7, 9, 10, 12, 13 and 15 are rejected under 35 U.S.C. § 102(b) as being anticipated by Watanabe et al.

It is submitted that the claims are not anticipated by Watanabe et al for the following reasons. The Examiner states that the limitation "activated by the plasma treatment by any method selected from sputtering, vacuum depositing and ion plating" is a product-by-process limitation and does not appear to be further limiting as far as the structure of the product is concerned. However, Claim 1, as amended, now clearly indicates that it is the surface of the insulating substrate which is activated by plasma treatment and which insulating substrate has a metal layer formed thereon by sputtering, vacuum depositing or ion plating. Page 21, line 18, through page 23, line 1, clearly sets forth that the insulating substrate is activated by plasma treatment which produces on the surface of the insulating substrate by induced

collusion of cations oxygen polar groups and nitrogen polar groups which easily bind to a metal and, thereby, improve the adherability of a metal layer to the insulating substrate of the laminate of the present claims. Therefore, it is submitted, that the plasma treatment does, in fact, change physically and chemically the surface layer of the insulating substrate and, therefore, is a limitation in the claims that must be considered by the Examiner. Watanabe et al does not teach a plasma treatment of a surface of the insulating substrate to which a metal layer is adhered but teaches only the use of a primer coating in column 9, lines 37-46 on the molded article upon which is then vapor deposited an aluminum coating. Therefore, it is submitted, that the claims are not anticipated by Watanabe et al. Further, Watanabe et al do not teach the particulars of the insulating substrate as set forth in Claims 18-22 which involve more than one layer constituting the insulating substrate and particular orientations of the fibrous filler in the layers of the insulating substrate.

Claims 1-3, 5, 6, 8 and 9 are rejected under 35 U.S.C. § 102(b) as being anticipated by Inoue et al.

The claims are not anticipated by Inoue et al for the following reasons. The arguments set forth above in the response to the rejection over Watanabe et al apply equally to the rejection over Inoue et al, since Inoue et al also do not show plasma treatment of an insulating substrate, but set forth procedures for the preparation of a base material for electroless plating in column 8, line 37, through column 9, line 18, which involve degreasing, pre-etching and etching to prepare the surface for electroless plating of a metal thereon. Therefore, the claims are not anticipated by Inoue et al. Further, the same arguments made with regard to Claims 18-22 in the response to the rejection over Watanabe et al apply equally to the rejection over Inoue et al.

Claims 1 and 7-10 are rejected under 35 U.S.C. § 102(e) as being anticipated by

Okano et al.

The claims are not anticipated by Okano et al for the following reasons. The same arguments made above in response to the rejection over Watanabe et al apply equally to the rejection over Okano et al, since Okano et al do not teach a plasma treatment of an insulating substrate, but teach only a coating method of a resin varnish containing whiskers on a carrier film, which carrier film can be metal, in embodiment C and in embodiment D recites that the surface of a copper foil is roughened in order to promote adhesion between a resin layer and a copper foil in the preparation of a printed circuit board. Therefore, the claims are not anticipated by Okano et al. Further, the arguments made above in the response to the rejection over Watanabe et al with regard to Claims 18-22 apply equally to the rejection of the claims over Okano et al.

Claims 1, 4 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Okano et al in view of Bersted et al.

The claims distinguish over the combination of references, because Bersted et al do not remedy the deficiencies of the Okano et al reference, as discussed above.

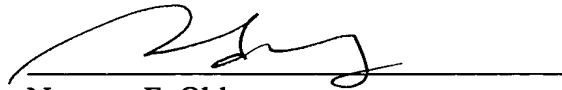
Claims 1, 12 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Okano et al in view of Freeman et al.

The claims distinguish over the combination of references, because Freeman et al do not remedy the deficiencies of the Okano et al reference, as discussed above.

It is submitted that Claims 1-22 are allowable and such action is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Norman F. Oblon
Attorney of Record
Registration No. 24,618

Roland E. Martin
Registration No. 48,082



22850

TEL: (703) 413-3000

FAX: (703) 413-2220

I:\atty\rem\208285us-am.wpd

MARKED-UP COPY OF AMENDMENT

IN THE CLAIMS

--1. (Amended) A laminate comprising a metal layer which [is formed on and] covers the surface of an insulating substrate, which substrate is activated by [the] plasma treatment and which metal layer is formed on said substrate by [any method selected from a] sputtering [method], [a] vacuum depositing [method and] or [an] ion plating [method], wherein [the] said substrate is obtained by molding a resin composition containing 20 to 150 parts by mass of a fibrous filler having an average fiber diameter of 0.1 to 5 μm and an average fiber length of 10 to 50 μm relative to 100 parts by mass of a base resin [comprising] which is a thermoplastic resin [and] or a thermosetting resin or mixtures thereof.

2. (Amended) The laminate according to Claim 1, wherein [1 or 2] one or more resins having at least 1 bond or functional group selected from the group consisting of an amido bond, a sulfide group, a cyano group, an ester group, a sulfone group, a ketone group, and an imido group are used [as the] in said base resin.

3. (Amended) The laminate according to Claim [2] 1, wherein [1 or 2] one or more resins selected from the group consisting of nylon 46, nylon 11, nylon 6-10, nylon 12, nylon 6, nylon 66, poly(phthalamide), polyphenylene sulfide, poly(ether nitrile), polyethylene terephthalate, polybutylene terephthalate, polysulfone, poly(ether sulfone), poly(ether [ether] ketone), poly(ether imide) and melt-type liquid crystal polyester are used [as the] in said base resin.

4. (Amended) The laminate according to Claim [3] 1, wherein poly(phthalamide) is

used [as the] in said base resin.

5. (Amended) The laminate according to Claim [3] 1, wherein melt-type liquid crystal polyester is used [as the] in said base resin.

6. (Amended) The laminate according to Claim 1, wherein at least one titanate is used as [the] said fibrous filler.

7. (Amended) The laminate according to Claim 1, wherein at least one borate is used as [the] said fibrous filler.

8. (Amended) The laminate according to Claim 1, wherein wallastonite is used as [the] said fibrous filler.

9. (Amended) The laminate according to Claim 6, wherein at least [1] one compound selected from the group consisting of potassium titanate, calcium titanate, and barium titanate is used as [the] said titanate.

10. (Amended) The laminate according to Claim 7, wherein at least [1] one compound selected from the group consisting of aluminium borate and magnesium borate is used as [the] said borate.

11. (Amended) The laminate according to Claim 4, wherein at least [1] one compound selected from the group consisting of a titanate, a borate and wallastonite is used as [the] said fibrous filler.

12. (Amended) The laminate according to Claim 1, wherein [the] said resin composition further contains [an unshaped] a powdery filler having an average particle size of 0.1 to 20 μm .

13. (Amended) The laminate according to Claim 1, wherein [the] said resin composition further contains [of] a spherical filler having an average particle size of 0.1 to 20 μm .

14. (Amended) The laminate according to Claim 12, wherein wallastonite is used as [the] said fibrous filler and kaolin is used as [the unshaped] said powdery filler.

15. (Amended) The laminate according to Claim 13, wherein aluminium borate is used as [the] said fibrous filler and silica is used as [the] said spherical filler.

Claims 16-22 (New).--